

IN THE CLAIMS:

Please amend the Claims so as to read as follows:

1. (Currently Amended) A source driver for supplying a plurality of gray scale voltages for driving each of a plurality of liquid crystal pixels required to be AC-driven, respectively, such that each said pixel displays a target gray scale level corresponding to a data signal supplied thereto, said source driver comprising:
 - a resistance-type voltage division circuit, which is an internal part of said source driver, for generating said plurality of gray scale voltages;
 - wherein positive-side (high level) voltage resistance division ratios and negative-side (low level) voltage resistance division ratios of the resistance-type voltage division circuit are set so as to be asymmetrical with one another depending on level shift characteristics respectively associated with each said target gray scale level.

2. (Currently Amended) A source driver for supplying a plurality of gray scale voltages for driving each of a plurality of liquid crystal pixels required to be AC-driven, respectively, such that each said pixel displays a target gray scale level depending on a data signal supplied thereto, said source driver comprising:

a resistance-type voltage division circuit, which is an internal part of said source driver, for generating said plurality of gray scale voltages;

wherein resistance division ratios of the resistance-type voltage division circuit are set to conform to the target gray scale display characteristics associated with said target gray scale levels.

3. (Currently Amended) ~~The A source line driver of claim 1~~ further comprising: drive circuit, comprising:

a gray scale reference voltage generation circuit, and
a source driver for supplying a plurality of gray scale
voltages for driving each of a plurality of liquid
crystal pixels required to be AC-driven, respectively,
such that each said pixel displays a target gray scale
level corresponding to a data signal supplied thereto,
said source driver comprising:

a resistance-type voltage division circuit, which is an
internal part of said source driver, for generating
said plurality of gray scale voltages.

wherein positive-side (high level) voltage resistance division ratios and negative-side (low level) voltage resistance division ratios of the resistance-type voltage division circuit are set so as to be asymmetrical with one another depending on level shift characteristics respectively associated with each said target gray scale level; and

wherein said source driver is provided with a plurality of input terminals, to ~~which~~ said plurality of input terminals are supplied gray scale reference voltages each having a different voltage level, and positive-side and negative-side gray scale voltages are generated based on the plurality of gray scale reference voltages.

4. (Currently Amended) ~~The A source line driver of claim 2; further comprising~~
drive circuit, comprising:

a gray scale reference generation circuit, and
a source driver for supplying a plurality of gray scale voltages for driving each of a plurality of liquid crystal pixels required to be AC-driven, respectively, such that each said pixel displays a target gray scale level depending on a data signal supplied thereto, said source driver comprising:

a resistance-type voltage division circuit, which is an internal part of said source driver, for generating said plurality of gray scale voltages,

wherein resistance division ratios of the resistance-type voltage division circuit are set to conform to the target gray scale display characteristics associated with the target gray scale levels; and

wherein the source driver is provided with a plurality of input terminals, to ~~which~~ said plurality of input terminals are supplied gray scale reference voltages each having a different voltage level, and positive-side and negative-side gray scale voltages are generated based on the plurality of gray scale reference voltages.

5. (Currently Amended) The source driver of claim 1, further comprising:
two input terminals, to one of ~~which~~ said input terminals is being supplied a positive-side highest-level reference voltage and to the other of ~~which~~ said input terminals is being provided a negative-side lowest-level reference voltage, and positive-side and negative-side gray scale voltages are generated based on said highest-level reference voltage and said lowest-level reference voltage.

6. (Currently Amended) The source driver of claim 2, further comprising:

two input terminals, to one of ~~which~~ said input terminals is being supplied a positive-side highest-level reference voltage, and to the other of ~~which~~ said input terminals is being provided a negative-side lowest-level reference voltage, and positive-side and negative-side gray scale voltages are generated based on said highest-level reference voltage and said lowest-level reference voltage.

7. (Currently Amended) An active-matrix liquid crystal display device comprising:

a plurality of pixels disposed in a matrix;

a plurality of data signal lines disposed corresponding to columns of the pixels;

a plurality of scanning signal lines disposed corresponding to rows of the pixels;

switching devices at the individual pixels; and

~~the a~~ a source line drive circuit of ~~claim 3~~ for driving the data signal lines, comprising:

a gray scale reference voltage generation circuit, and
a source driver for supplying a plurality of gray scale
voltages for driving each of a plurality of liquid
crystal pixels required to be AC-driven, respectively,
such that each said pixel displays a target gray scale
level corresponding to a data signal supplied thereto,
said source driver comprising:

a resistance-type voltage division circuit, which is an
internal part of said source driver, for generating
said plurality of gray scale voltages,

wherein positive-side (high level) voltage resistance division ratios and negative-side (low level) voltage resistance division ratios of the resistance-type voltage division circuit are set so as to be asymmetrical with one another depending on level shift characteristics respectively associated with each said target gray scale level; and

wherein the source driver is provided with a plurality of input terminals, to said plurality of input terminals are supplied gray scale reference voltages each having a different voltage level, and positive-side and negative-side gray scale voltages are generated based on the plurality of gray scale reference voltages.

8. (Currently Amended) An active-matrix liquid crystal display device comprising:

a plurality of pixels disposed in a matrix;

a plurality of data signal lines disposed corresponding to columns of the pixels;

a plurality of scanning signal lines disposed corresponding to rows of the pixels;

switching devices at the individual pixels; and

the a source line drive circuit of claim 4 for driving the data signal lines, comprising:

a gray scale reference generation circuit, and
a source driver for supplying a plurality of gray scale
voltages for driving each of a plurality of liquid
crystal pixels required to be AC-driven, respectively,
such that each said pixel displays a target gray scale
level depending on a data signal supplied thereto,
said source driver comprising:
a resistance-type voltage division circuit, which is an
internal part of said source driver, for generating
said plurality of gray scale voltages,
wherein resistance division ratios of the resistance-type
voltage division circuit are set to conform to the
target gray scale display characteristics associated
with the target gray scale levels; and
wherein the source driver is provided with a plurality of
input terminals, to said plurality of input terminals
are supplied gray scale reference voltages each
having a different voltage level, and positive-side and
negative-side gray scale voltages are generated based
on the plurality of gray scale reference voltages.

9. (Currently Amended) A source driver for supplying a plurality of gray scale voltages for driving each of a plurality of liquid crystal pixels required to be AC-driven, respectively, such that each said pixel displays a target gray scale level depending on a data signal supplied thereto, said source driver comprising:

a resistance-type voltage division circuit, which is an internal part of said source driver, for generating said plurality of gray scale voltages;

wherein resistance division ratios of the resistance-type voltage division circuit are set to conform to the target level shift characteristics and γ characteristics of said target gray scale levels.

10. (Currently Amended) ~~The A source line driver of claim 9; further comprising~~
drive circuit, comprising:

a gray scale reference generation circuit, and
a source driver for supplying a plurality of gray scale
voltages for driving each of a plurality of liquid
crystal pixels required to be AC-driven, respectively,
such that each said pixel displays a target gray scale
level depending on a data signal supplied thereto,
said source driver comprising:

a resistance-type voltage division circuit, which is an
internal part of said source driver, for generating
said plurality of gray scale voltages;

wherein resistance division ratios of the resistance-type voltage division circuit are set to conform to the target level shift characteristics and γ characteristics of said target gray scale levels; and

wherein the source driver is provided with a plurality of input terminals, to ~~which~~ said plurality of input terminals are supplied gray scale reference voltages each having a different voltage level, and positive-side and negative-side gray scale voltages are generated based on the plurality of gray scale reference voltages.

11. (Currently Amended) The source driver of claim 9, further comprising:

two input terminals, to one of ~~which~~ said input terminals is being supplied a positive-side highest-level reference voltage and to the other of ~~which~~ said input terminals is being provided a negative-side lowest-level reference voltage, and positive-side and negative-side gray scale voltages are generated based on said highest-level reference voltage and said lowest-level reference voltage.